



(19)

Europäisches Patentamt

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(11)

EP 0 941 984 A3

(12)

## EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
**05.04.2000 Bulletin 2000/14**

(51) Int. Cl.<sup>7</sup>: **C07C 69/54**, C07C 67/327,  
C07C 69/675, C07C 67/20,  
C07C 231/06, C07C 235/06,  
C07C 253/00, C07C 255/12,  
C01C 3/02

(43) Date of publication A2:  
**15.09.1999 Bulletin 1999/37**

(21) Application number: **99103069.3**

(22) Date of filing: **17.02.1999**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE**

Designated Extension States:

**AL LT LV MK RO SI**

(30) Priority: **11.03.1998 JP 5973298**

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### (54) Method of producing a methyl methacrylate

(57) A method of producing methyl methacrylate comprises Step 1 of producing acetone cyanhydrin from hydrogen cyanide and acetone; Step 2 of producing  $\alpha$ -hydroxyisobutyramide by hydrating acetone cyanhydrin; Step 3 of producing methyl  $\alpha$ -hydroxyisobutyrate and ammonia by a reaction of  $\alpha$ -hydroxyisobutyramide and methanol; Step 4 of producing methyl methacrylate by dehydrating methyl  $\alpha$ -hydroxyisobutyrate; and Step 5 of producing hydrogen cyanide in vapor phase by reacting methanol and the ammonia obtained in Step 3 over a solid catalyst in the presence of molecular oxygen. By using methanol in the step 3, the conversion ratio of  $\alpha$ -hydroxyisobutyramide into methyl  $\alpha$ -hydroxyisobutyrate can be increased because the equilibrium of the reaction is easily shifted toward the product side by removing ammonia being produced from the reaction system. The use of methanol in the step 3 produces additional advantages of efficiently linking the steps to eliminate the steps for separation and purification, thereby reducing the production cost.



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## EUROPEAN SEARCH REPORT

Application Number  
EP 99 10 3069

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C07C			
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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09-02-2000

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